

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: Jonathan Burr, *et al.*
Application Serial No.: 10/526,034
Filing Date: 28 October 2005
Title: APPARATUS AND METHOD FOR PROVIDING TRAFFIC
INFORMATION
Examiner: Long, Fonya M.
Art Unit: 3689
Atty. Docket No.: 62800-028
Confirmation No.: 4687

TRANSMITTAL OF APPEAL BRIEF

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Submitted herewith is Appellant's Appeal Brief in support of the Notice of Appeal filed 16 April 2009 for the above-referenced application. A petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge the Appeal Brief fee of \$540.00 to Deposit Account 501133. Please charge any fees due under 37 C.F.R. § 1.17 and § 41.20, in connection with the filing of this paper, and extension of time fees under 37 C.F.R. § 1.136 (two months), to Deposit Account 501133.

Respectfully submitted,

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Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed 16 April 2009, wherein Appellant appeals from the Examiner's rejection of claims 81-88 and 90-105 of the subject application.

Real Party In Interest

The subject application is assigned to Itis Holdings PLC, by assignment recorded on 28 October 2005, at Reel 017146, Frame 0502.

Related Appeals and Interferences

To the best of Appellant's and Appellant's representatives' knowledge, there are no related appeals or interferences (see Related Proceedings Appendix).

Status of Claims

1. Claims canceled: 1-80, and 89
2. Claims withdrawn from consideration, but not canceled: None
3. Claims pending: 81-88 and 90-105
4. Claims allowed: None
5. Claims rejected: 81-88 and 90-105
6. Claims on appeal: 81-88 and 90-105

Status of Amendments

Amendments to claims 81 and 98 were submitted in the Appellant's amendment filed 16 January 2009 in response to the Final Office Action of 16 October 2008. By way of the Advisory Action mailed 20 February 2009, the Examiner stated that the amendments to claims 81 and 98 "will not be entered." Pursuant to 37 CFR § 41.37, the claims presented and discussed herein do not reflect the claim amendments filed on 16 January 2009.

Summary of Claimed Subject Matter

The following is a summary of the claimed subject matter, with supporting references provided relative to the specification of the subject application as filed. It is noted that the subject application is a national phase entry of International Application No. PCT/GB2003/003702; the indicated page paragraph numbers correspond to those of the published application, i.e., U.S. Patent Application Publication No. US2006/0122846.

A. Summary of Independent Claims

Claim 81

Independent claim 81 of the subject application recites a method for providing traffic information comprising route results, the method comprising:

for each segment of a route between an origin point and a destination point, performing a time-dependent journey planning calculation, based on a time during which a vehicle is predicted to be travelling through the segment, to produce a segment result; (paragraph [0011])

receiving real time data relating to real time vehicle location from a plurality of vehicle bound probes and other sensory data to ensure and maintain accuracy of segment results; (paragraphs [0013], [0052], and [0073])

forming a plurality of route results, each route result being formed based on a plurality of the segment results; (paragraph [0011])

wherein the step of forming comprises creating a matrix of vehicle speeds, wherein vehicle speeds over each segment are recorded with specific times of day such that speeds are divided into a plurality of separate time of day intervals; (original claim 89 and paragraph [0013])

storing the plurality of route results in a rapid access means in a digital storage means; (paragraphs [0011] and [0012])

accessing the rapid access means for use in responding to a user request for traffic information for a journey between the origin point and the destination point; (paragraph [0011])

disseminating said traffic information to vehicles on route via a radio data system, a mobile telephone or computer (paragraph [0016]); and

verifying the real time data wherein the verifying comprises correlation of said real time data with data stored in the rapid access means and said other sensory data. (paragraph [0082])

Claim 98

Independent claim 98 recites a system for providing traffic information comprising route results, the system comprising:

a route segment processor for performing, for each segment of a route between an origin point and a destination point, a time-dependent journey planning calculation based on a time during which a vehicle is predicted to be travelling through the segment, to produce a segment result (paragraph [0020]);

a data receiver for receiving real time data relating to real time vehicle location from a plurality of vehicle bound probes and other sensory data to ensure and maintain accuracy of segment results; (paragraph [0022]; also road speed matrix module 260 described at paragraph [0082] and shown in FIG. 2) and

a route result formation means for forming a plurality of route results, the plurality of route results being formed based on a plurality of the segment results, wherein the route result formation means comprises means for creating a matrix of vehicle speeds, wherein vehicle speeds over each segment are recorded with specific times of day such that the speeds are divided into a plurality of

separate time of day intervals; (paragraph [0020]) and “Road Timetable TM Module described at paragraph [0080] and shown in FIG. 1 as reference character 160)

a rapid access means, in a digital storage means, for storing the plurality of route results; A structure/step corresponding to rapid access means is described in the specification as being a look-up table (paragraph [0021]; additionally, the specification describes that the calculations may be store in an equivalent way a rapid access matrix (paragraph [0090]) for the description of FIG. 7C.)

a user request processor for accessing the rapid access means for use in responding to a user request for traffic information for a journey between the origin point and the destination point; (paragraph [0020] and the customer request shown in FIG. 1 accommodated by calculation framework 110) and

disseminating means for disseminating said traffic information to vehicles on route via a radio data system, a mobile telephone or computer; (paragraph [0026])

wherein the data receiver is operable to verify the real time data by correlating the real time data with data stored in the rapid access means and said other sensory data. (paragraph [0082] and FIG. 2.)

B. Identification of Means/Step Plus Function

Regarding independent claim 81, Appellant notes that a rapid access means and a digital storage means are both recited. A structure/step corresponding to rapid access means is described in the specification as being a look-up table (paragraph [0021]). Furthermore, a rapid access means is described as being any memory means capable of storing the results of the matrix calculations

(paragraph [0096]); additionally, the specification describes that the calculations may be store in an equivalent way a rapid access matrix (paragraph [0090]) for FIG. 7C. In Appellant's specification, a digital storage medium is described as being equivalent to a digital storage means (paragraph [0022]); further, the matrix, also referred to as a road speed matrix, is described as a module (paragraph [0076]), which the Appellant's specification (paragraph [0115]) teaches can be "implemented using general purpose or application specific computer apparatus."

Regarding dependent claim 88, Appellant notes that a rapid access means is recited. Consistent with the claims, a structure/step corresponding to rapid access means is described in the specification as including a look-up table (paragraph [0021]).

Regarding independent claim 98, Appellant notes that the following means plus function limitations are recited: (i) a route result formation means, (ii) a means for creating a matrix of vehicle speeds, (iii) a rapid access means, (iv) a digital storage means, and (v) disseminating means for disseminating said traffic information to vehicles on route. The Road Speed Matrix module described at paragraph [0075], and shown by reference character 150 in FIG. 1, is equivalent to both the route result formation means and the means for creating a matrix of vehicle speeds. The specification also teaches an algorithm (at paragraph [0070]) of the Road Timetable TM can be used to create a distance and time matrix. A rapid access means is described as including a look-up table (paragraph [0021]) or being any memory means capable of storing the results of the matrix calculations (paragraph [0096]). In Appellant's specification, a digital storage medium is described, equivalently, as a digital storage means (paragraph [0022]). Disseminating means for accessing the rapid access means include a radio data system, a mobile telephone or computer (paragraph [0026]).

Regarding dependent claim 99, Appellant notes that means for determining a segment duration are recited. The specification provides a description of an equivalent algorithm or steps for determining a segment duration at paragraphs [0087] and [0088].

Regarding dependent claim 100, Appellant notes that route result formation means and means for summing plurality of segment durations are both recited. The specification provides a description of an equivalent algorithm or steps for summing a plurality of road lengths or segments at paragraph [0087] and [0088].

Regarding dependent claim 101, Appellant notes that means for determining a predicted vehicle speed are recited. The specification provides a description of an equivalent algorithm or steps for forecasting vehicle speeds on road lengths or segments at paragraphs [0087] and [0088].

Regarding dependent claim 102, Appellant notes that route result formation means and means for averaging a plurality of predicted vehicle speeds are recited. As described previously, route result formation means are described at [0075]. Means for averaging are described as including standard statistical averaging and forecasting techniques such as exponential smoothing, at paragraph [0068].

Regarding dependent claim 103, Appellant notes that means for forming the time-dependent journey planning calculation is/are recited. The specification describes equivalent steps algorithms at, e.g., paragraph [0089] for FIG. 7B.

Regarding dependent claim 105, Appellant notes that the rapid access means are recited. As noted previously, a structure/step corresponding to rapid access means is described in the specification as being a look-up table (paragraph [0012]); additionally, the specification describes that the calculations may be store in an equivalent way a rapid access matrix (paragraph [0090]) for FIG. 7C.

Grounds of Rejection To Be Reviewed On Appeal

I. Claims 81-50, 90, and 98-102 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,341,255 to Lapidot ("*Lapidot* '255") in view of U.S. Patent No. 6,545,637 to Krull et al. ("*Krull*");

II. Claims 86, 91, 95, 96, and 103 stand rejected as being unpatentable over *Lapidot* '255 and *Krull* in further view of U.S. Patent Application Publication No. US 2003/0135304 to Sroub et al. ("*Sroub*");

III. Claims 87 and 104 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lapidot* '255 in view of *Krull* and in further view of *Sroub* and U.S. Patent No. 6,317,686 to Ran ("*Ran*") and the Examiner's Official Notice ("*Examiner's Official Notice*");

IV. Claims 88 and 105 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lapidot* '255 in view of *Krull*, both previously cited, and in further view of U.S. Patent No. 5,465,088 to Braegas ("*Braegas*");

V. Claim 92 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lapidot* '255 in view of *Krull* in further view of *Sroub*, all cited previously, and in further view of Grubbs Test for Outliers ("*Grubbs Test for Outliers*");

VI. Claims 93 and 94 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lapidot* '255 in view of *Krull* and in further view of *Sroub* and *Ran*, all described previously; and

VII. Claim 97 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lapidot* '255 in view of *Krull*, in further view of *Sroub*, all cited previously, and in view of U.S. Patent No. 6,490,519 to Lapidot et al. ("*Lapidot* '519").

Argument

I. Claims 81-85, 90, and 98-102 are allowable over *Lapidot '255* and *Krull*

As noted previously, claims 81 and 98 are the two independent claims of the subject application. Claims 82-85 and 90 depend from claim 81 while claims 99-102 depend from claim 98.

In the final Office Action mailed 16 October 2008 for the subject application, the Examiner maintained the rejection of claims 81-85, 90, and 98-102 under 35 U.S.C. § 103(a) as being unpatentable over *Lapidot '255* and *Krull*. It is alleged by the Examiner that the combination of *Lapidot '255* and *Krull* discloses all of the limitations of claims 81-85, 90, and 98-102. Appellant respectfully disagrees. Moreover, the Appellant submits that the differences between the teachings of *Lapidot '255* and *Krull*, are not such that the subject matter of claims 81-85, 90, and 98-102 would be obvious to a person of ordinary skill in the art, for at least the following reasons.

As noted by the Supreme Court in *KSR International Co. v. Teleflex Inc. (KSR)*, 550 U.S. 398, 82 USPQ2d 1385 (2007), [35 U.S.C. § 103] forbids the issuance of a patent when “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Sratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983). For such analysis, “[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

The Supreme Court quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), stated that **"rejections on obviousness cannot be sustained by mere conclusory statements [emphasis added];** instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR*, 550 U.S. at 412, 82 USPQ2d at 1396. MPEP § 2141 explains that, in light of the Supreme Court's holding in *KSR*, exemplary rationales that may support a conclusion of obviousness include:

- (A) Combining prior art elements according to known methods to yield predictable results;
- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known technique to improve similar devices (methods, or products) in the same way;
- (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- (E) "Obvious to try" - choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art; and

(G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

In support of the contention that the rejection under 35 U.S.C. 103 is improper, Appellant notes that the Examiner has not adduced any clear articulation of the reason(s) why the claimed invention would have been obvious. Instead, the Examiner has mischaracterized the teachings of *Lapidot* '255 while at the same time ignoring express limitations recited in Appellant's independent claims 81 and 98. The Examiner then provides the conclusory statement that from the teachings of *Krull* it would have been obvious to one of ordinary skill in the art to modify the apparatus and method of *Lapidot* '255 to arrive at the Appellant's claimed systems and methods as doing so would "provide a user with a more understandable, accurate and timely route calculation." It is noted that in making the statement, the Examiner has not explained what "a more understandable, accurate and timely route calculation" actually means.

According to claim 81, the step of forming the plurality of route results comprises creating a matrix of vehicle speeds, wherein vehicle speeds over each segment are recorded with specific times of day such that speeds are divided into a plurality of separate time of day intervals. Hence, vehicle speeds are recorded with specific times of day and the speeds are divided into separate "time buckets" throughout the day, where each time bucket may be a five or fifteen minute interval, or whatever time interval is appropriate. See Appellant's specification, paragraph [0076].

For the claimed invention, data corresponding to each time bucket forms historic data, and the historic data is stored in a rapid access matrix in a database, where the lowest level of detail is the speed

of a particular type of vehicle on a specific road length at a particular time on a particular day and day of the week. According to the Appellant's claimed invention, sufficient historic data may be aggregated and, after validation, used to forecast trends and create predictions of future vehicle speeds.

Also as recited in Appellant's claim 81, there is also provided a step of "receiving real time data relating to real time vehicle location from a plurality of vehicle bound probes and other sensory data to ensure and maintain accuracy of segment results." In other words, there is an inflow of real-time data used to update the matrix to make sure it remains at its most accurate. See Appellant's specification, paragraph [0073].

Furthermore, claim 81 provides a step of "verifying real time data wherein verifying comprises correlation of said real time data with data stored in the rapid access means and other received sensory data". In other words, the received real-time traffic data is verified using the above-described historical data (i.e., time buckets of data stored in the rapid access means), as well as other sensory data. See Appellant's specification, paragraph [0082]. Hence, the real-time traffic data is cleansed and validated such that the matrix is only updated with the most accurate real-time data. This improved data verification enables particularly accurate journey planning and traffic information.

Independent claim 98 recites a system for providing traffic information including route results, and includes limitation analogous or similar to those recited above for claim 81. Specifically, claim 98 recites, inter alia, the following limitations:

- a data receiver for receiving real time data relating to real time vehicle location from a plurality of vehicle bound probes and other sensory data to ensure and maintain accuracy of segment results;

- means for creating a matrix of vehicle speeds, wherein vehicle speeds over each segment are recorded with specific times of day such that the speeds are divided into a plurality of separate time intervals; and
- wherein the data receiver is operable to verify the real time data by correlating the real time data with data stored in the rapid access means and said other sensory data.

For the rejection of claims 81 and 98, the Examiner alleges that *Lapidot* '255 discloses all of the elements of the claims, except for the limitations stated in the following disclaimer (on page 3 of the Office Action of 16 October 2008): "However, *Lapidot* ['255] fails to explicitly disclose a data received for receiving real time data [sic]; disseminating traffic information to vehicles on route; and verifying the real time data by correlating the real time data with data stored." In addition to these deficiencies expressly admitted by the Examiner, *Lapidot* '255 fails to teach or suggest additional limitations of Appellant's independent claims 81 and 98.

Relative to independent claims 81 or 98, Appellant submits that *Lapidot* '255 fails to at the very least disclose (or suggest) creating a matrix of vehicle speeds, wherein vehicle speeds over each segment are recorded with specific times of day such that speeds are divided into a plurality of separate time of day intervals. In addition, *Lapidot* '255 does not disclose or suggest receiving real time traffic data relating to real time vehicle location from a plurality of vehicle bound probes and other sensory data to ensure and maintain accuracy of segment results, and verifying the real time data wherein verifying comprises correlation with data stored in the rapid access means and other received sensory data.

In setting forth the limitations of Appellant's claim 98 for the rejection, the Examiner states that *Lapidot* '255 discloses "a route result formation means for forming a plurality of route results being formed based on a plurality of the segment results (Col. 6, lines 27-34, discloses all driver's routes being selected on current and anticipated average traffic speeds on candidate roads and road segments)." Appellant notes that language recited by the Examiner is not the full portion of the noted limitation of claim 98. The Examiner has clearly disregarded limitations of claim 98, and for that matter 81. It is again noted that "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

The secondary reference, *Krull*, fails to teach or suggest the shortcomings of *Lapidot* '255.

Krull discloses a route planning system and device in which the real-time location and speed of a vehicle is continuously updated using GPS (col. 3, lines 38-52). Such teaching by *Krull* does not appear to be any more relevant than the state of the art that is acknowledged in the background section on page 3 of the subject application, which describes the use of GPS to detect a vehicle location for use in the "floating vehicle data" (FVD) technique. Moreover, *Krull* is not understood as teaching a matrix as recited in Appellant's claims. Thus, *Krull* does not cure the deficiencies of *Lapidot* '255 relative to Appellant's independent claims 81 and 98.

Appellant submits that the Examiner has mischaracterized the teachings of *Lapidot* '255, at the very least, with regard to the limitation of "a route result formation means" of Appellant's claim 98. Likewise, the Examiner has mischaracterized the teachings of *Lapidot* '255 relative to the limitation of "forming a plurality of route results, each route result being formed based on a plurality of the segment

results; wherein the step of forming comprises creating a matrix of vehicle speeds, wherein vehicle speeds over each segment are recorded with specific times of day such that speeds are divided into a plurality of separate time of day intervals" of Appellant's claim 81. These mischaracterizations represent clear error, which undermines the Examiner's rejection of independent claims 81 and 98.

Referring to page 4 of the most recent Office Action (16 October 2008), the Examiner states that *Krull* "discloses verifying the current position of a vehicle (i.e., real time data)". In view of this comment, it seems that the Examiner is interpreting "real-time data" of the independent claims to be nothing more than the real-time location of a vehicle as determined by a GPS system.

On this point, Appellant notes that "real time data" as defined in the claims (e.g., claims 81 and 98) is not merely the location of a vehicle, but the traffic conditions in or at the vehicle's location, as is apparent from, for example, paragraphs [0062]-[0064] of the subject application, which disclose: integrating real time data to estimate a delay time at a particular traffic congestion event; integrating real time data to estimate time of arrival before or during a particular journey; and, integrating real time data to determine the quickest route before or during a particular journey.

In view of the foregoing remarks, it is evident that *Lapidot* '255 and *Krull* (alone or together) fail to teach or suggest (at the very least) forming "a matrix of vehicle speeds" or "real time data" as per Appellant's claims, e.g., claims 81 and 98. The differences between the cited art and Appellant's claims, e.g., claims 81 and 98, would not render the claims obvious to a person of ordinary skill in the art, even in light of the holding of KSR.

Thus, *Lapidot* '255 and *Krull* (whether considered alone or in any combination) form an improper basis for a rejection of claims 81-85, 90, and 98-102 under 35 U.S.C. § 103(a); Appellant therefore respectfully requests that the rejections be removed accordingly.

II. Claims 86, 91, 95, 96, and 103 are allowable over *Lapidot* '255 and *Krull* in further view of *Sroub*

Claims 86, 91, 95, 96, and 103 stand rejected over *Lapidot* '255 and *Krull* in further view of *Sroub*. The description of *Lapidot* '255 and *Krull* and their deficiencies relative to independent claims 81 and 98 as described in Section I of this Argument, *supra*, are re-alleged and incorporated by reference into this section.

For the rejection of claims 86, 91, 95, 96, and 103, the Examiner has expressly admitted that the combination of *Lapidot* '255 and *Krull* fails to disclose that the traffic congestion is identified using a database of traffic patterns.

The *Sroub* reference discloses an experience based travel database and correlating static data (e.g. location) with dynamic data (e.g., weather, time of day) and experience data (e.g. average speed during certain weather at a certain time). *Sroub* is cited by the Examiner as teaching “a system for computing a trip route with the concept of the traffic congestion being identified using a database of traffic patterns ([0056] via modeling that integrates information stored in the historical database with the real time data (i.e. real time traffic data)).”

As is evident from the disclosure of *Sroub et al*, the real-time data is used to supplement static data (see paragraphs 6, 29, 31 of *Sroub*) and the remote processing system (RPS) integrates real-time data received from a vehicle with data stored in the database in order to re-compute route and predicted arrival time information. See paragraph 33 of *Sroub*. The *Sroub* reference does not, however, disclose

or suggest verifying real-time data using stored data in the database and other sensory data. *Sroub*, therefore, fails to remedy the deficiencies noted for *Lapidot '255* and *Krull* relative to the base claims (i.e., claims 81 and 98) of claims 86, 91, 95, 96, and 103.

Under Federal Circuit holdings, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Since *Sroub* does not cure the deficiencies of *Lapidot '255* and *Krull* noted in Section I, *supra*, relative to independent claims 81 and 98, the cited combination of *Lapidot '255*, *Krull*, and *Sroub* fails to teach or suggest all of the limitations of claims 86, 91, 95, 96, and 103. Consequently, the cited combination fails to form a proper basis for a rejection of claims 86, 91, 95, 96, and 103 under 35 U.S.C. § 103(a); Appellant therefore respectfully requests removal of the rejection and allowance of the claims.

III. Claims 87 and 104 are allowable over *Lapidot '255* and *Krull* in further view of *Sroub*, in further view of *Ran* and *Examiner's Official Notice*.

Claims 87 and 104 stand rejected over *Lapidot '255* and *Krull* in further view of *Sroub*, in further view of *Ran* and the *Examiner's Official Notice*. The description of *Lapidot '255*, *Krull*, and *Sroub* and their deficiencies relative to independent claims 81 and 98 as described in Section II of this Argument, *supra*, are re-alleged and incorporated by reference into this section.

Ran discloses a method for predicting travel times using weather information with the concept of the day of the week being selected from a group comprising a bank holiday such as a Memorial Day or the fourth of July. *Ran* does not, however, disclose or suggest verifying real-time data using historic

data stored in a database and other sensory data, and updating data stored in a database using the verified real-time data. Ran, therefore, fails to cure the deficiencies noted previously for Lapidot '255, Krull, and Sroub relative to independent claims 81 and 98, which are the base claims for claims 87 and 104.

The *Examiner's Official Notice* recognizes that it is old and well known in the art “that the days of the week are Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday, wherein a day before a Bank Holiday and a Day after a Bank Holiday would be considered either [sic] a Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, or Saturday”. The Examiner's Official Notice does not cure the deficiencies noted previously for Lapidot '255 and Krull in further view of Sroub, in further view of Ran.

As noted previously, under Federal Circuit holdings, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Since *Ran* and the *Examiner's Official Notice* do not cure the deficiencies of *Lapidot '255*, *Krull*, and *Sroub* noted in Section II, *supra*, relative to independent claims 81 and 98, the cited combination of *Lapidot '255*, *Krull*, *Sroub*, *Ran*, and *Examiner's Official Notice* fails to teach or suggest all of the limitations of claims 87 and 104. Consequently, the cited combination fails to form a proper basis for a rejection of claims 87 and 104 under 35 U.S.C. § 103(a); Appellant therefore respectfully requests removal of the rejection and allowance of the claims.

IV. Claims 88 and 105 are allowable over Lapidot '255 and Krull, in further view of Braegas

Claims 88 and 105 stand rejected over *Lapidot '255* and *Krull* in further view of *Braegas*. The description of *Lapidot '255* and *Krull* and their deficiencies relative to independent claims 81 and 98

(the base claims for claims 88 and 105, respectively) as described in Section I of this Argument, *supra*, are re-alleged and incorporated by reference into this section.

Braegas discloses a traffic broadcast receiver but does not teach or suggest verifying real-time data using historic data stored in a database and other sensory data, and updating data stored in a database using the verified real-time data. *Braegas* does not cure the deficiencies of *Lapidot '255* and *Krull* relative to claims 81 and 98.

As noted above, under Federal Circuit holdings, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplicatic Engineering Co.*, 819 F.2d at 1100, 1108, 2 USPQ 1826, 1831 (Fed. Cir. 1987). Since *Braegas* does not cure the deficiencies of *Lapidot '255* and *Krull* noted in Section I, *supra*, relative to independent claims 81 and 98, the cited combination of *Lapidot '255*, *Krull*, and *Braegas* fails to teach or suggest all of the limitations of claims 88 and 105. Consequently, the cited combination fails to form a proper basis for a rejection of claims 88 and 105 under 35 U.S.C. § 103(a); Appellant therefore respectfully requests removal of the rejection and allowance of the claims.

V. Claim 92 is allowable over *Lapidot '255* and *Krull*, in view of *Sroub*, in further view of *Grubbs Test for Outliers*

Claim 92 stands rejected over *Lapidot '255* and *Krull* in further view of *Sroub*, in further view of *Grubbs Test for Outliers*. The description of *Lapidot '255*, *Krull*, and *Sroub* and their deficiencies relative to independent claim 81, as described in Section II of this Argument, *supra*, are re-alleged and incorporated by reference into this section.

Grubbs Test for Outliers discloses a statistical process for removing outliers. *Grubbs Test for Outliers* does not teach or suggest validating traffic data based on consideration of historic data stored in a matrix and other sensory data, and does not teach or suggest the deficiencies noted previously for *Lapidot '255* and *Krull* in further view of *Sroub*, relative to independent claim 81.

As noted above, under Federal Circuit holdings, If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Since *Grubbs Test for Outliers* does not cure the deficiencies of *Lapidot '255*, *Krull*, and *Sroub* noted in Section II, *supra*, relative to independent claim 81, the cited combination of *Lapidot '255*, *Krull*, *Sroub*, and *Grubbs Test for Outliers* fails to teach or suggest all of the limitations of claim 92.

Consequently, the cited combination fails to form a proper basis for a rejection of claim 92 under 35 U.S.C. § 103(a); Appellant therefore respectfully requests removal of the rejection and allowance of the claim.

VI. Claims 93 and 94 are allowable over *Lapidot '255* and *Krull*, in view of *Sroub* and *Ran*

Claims 93 and 94 stand rejected over *Lapidot '255* and *Krull* in further view of *Sroub*, in further view of *Ran*. The description of *Lapidot '255*, *Krull*, *Sroub*, and *Ran* and their deficiencies relative to independent claim 81 (the base claim of claims 93-94) as described in Section III of this Argument, *supra*, are re-alleged and incorporated by reference into this section.

According to Federal Circuit holdings, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596

(Fed. Cir. 1988). Thus, as independent claim 81 is patentable for the reasons set forth above, it is respectfully submitted that dependent claims 93 and 94 are also in condition for allowance.

VII. Claim 97 is allowable over *Lapidot '255* and *Krull*, in view of *Sroub* and further in view of *Lapidot '519*

Claim 97 stands rejected over *Lapidot '255* and *Krull* in further view of *Sroub*, in further view of *Lapidot '519*. The description of *Lapidot '255*, *Krull*, and *Sroub* and their deficiencies relative to independent claim 81 (the base claim of claim 97) as described in Section II of this Argument, *supra*, are re-alleged and incorporated by reference into this section.

Lapidot '519 does not use historic data to verify and validate the incoming real-time data before that data is used. As pointed out by the Examiner, *Lapidot '519 al.* discloses reporting information to the traveler only if the travel information deviates, in accordance with a predetermined deviation criteria, from a known travel time value. This is not equivalent to the limitations of claim 81, which utilize historical data and other sensory data to verify incoming real-time data, and to use that verified data to update the rapid access matrix. *Lapidot '519* does not disclose (or suggest) a matrix of the type presently claimed, nor does it disclose verification of real-time data as per claims 81. Thus, *Lapidot '519* does not cure the deficiencies noted previously for the combination of *Lapidot '255*, *Krull*, and *Sroub* relative to independent claim 81, the base claim of claim 97.

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Thus, as independent claim 81 is patentable for the reasons set forth above, and *Lapidot '519* fails to cure the

deficiencies of *Lapidot '255, Krull, and Sroub*, it is respectfully submitted that dependent claim 97 is patentable.

Conclusion

For all of the foregoing reason, Appellant respectfully submit that the rejections of the claims of the subject application are based on improper grounds and should be reversed. Appellant, therefore, respectfully solicits the Honorable Board to reverse the Examiner's rejections of the claims of the subject application under 35 U.S.C. § 103.

To the extent necessary, a petition for an extension of time under 37 CFR § 1.136 is hereby made. Please charge the fees for a Petition for Extension of Time under 37 C.F.R. § 1.136 (two months), and any other required fees, to Deposit Account 501133 and please credit any excess fees to such deposit account.

Respectfully submitted,

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CLAIMS APPENDIX

81. A method for providing traffic information comprising route results, the method comprising:

for each segment of a route between an origin point and a destination point, performing a time-dependent journey planning calculation, based on a time during which a vehicle is predicted to be travelling through the segment, to produce a segment result;

receiving real time data relating to real time vehicle location from a plurality of vehicle bound probes and other sensory data to ensure and maintain accuracy of segment results;

forming a plurality of route results, each route result being formed based on a plurality of the segment results;

wherein the step of forming comprises creating a matrix of vehicle speeds, wherein vehicle speeds over each segment are recorded with specific times of day such that speeds are divided into a plurality of separate time of day intervals;

storing the plurality of route results in a rapid access means in a digital storage means;

accessing the rapid access means for use in responding to a user request for traffic information for a journey between the origin point and the destination point;

disseminating said traffic information to vehicles on route via a radio data system, a mobile telephone or computer; and

verifying the real time data wherein the verifying comprises correlation of said real time data with data stored in the rapid access means and said other sensory data.

82. A method according to claim 81, wherein performing the time-dependent journey planning calculation for each segment comprises determining a segment duration for traversing the segment based on a predicted vehicle speed for the segment at the time during which the vehicle is predicted to be travelling through the segment.

83. A method according to claim 82, wherein forming the at least one route result comprises summing a plurality of segment durations to produce an overall route duration.

84. A method according to claim 81, wherein performing the time-dependent journey planning calculation for each segment comprises determining a predicted vehicle speed for traversing the segment based on the time during which the vehicle is predicted to be travelling through the segment.

85. A method according to claim 84, wherein forming the at least one route result comprises averaging a plurality of predicted vehicle speeds, each corresponding to a segment, to produce an overall predicted route speed.

86. A method according to claim 81, wherein performing the time-dependent journey planning calculation is based on a time of day and a day of the week during which the vehicle is predicted to be travelling through the segment.

87. A method according to claim 86, wherein the day of the week is selected from a group comprising Bank Holiday, Day before Bank Holiday, Day after Bank Holiday, Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday.

88. A method according to claim 81, wherein the rapid access means comprises a look-up table.

90. A method according to claim 81, wherein the plurality of vehicle-bound probes include at least one mobile telephone.

91. A method according to claim 81, further comprising:

creating a first matrix of recommended most economic routes relative to at least a plurality of time of day divisions and a plurality of routes, based on the matrix of vehicle speeds.

92. A method according to claim 91, further comprising, in creating the first matrix of recommended most economic routes, removing outlier vehicle speeds, and vehicle speeds related to unforecastable events, from the matrix of vehicle speeds using statistical analysis.

93. A method according to claim 91, wherein the first matrix of recommended most economic routes comprises a plurality of route matrix elements, each route matrix element corresponding to a pairing of an origin point with a destination point, and comprising: a route string, a shortest distance corresponding to the route string, a time corresponding to the route string, and a cost corresponding to the route string.

94. A method according to claim 93, wherein the route matrix elements further comprise entries for a plurality of possible vehicle types.

95. A method according to claim 91, further comprising:

identifying, in real time, an area of traffic congestion between the origin point and the destination point; and

determining an alternative, second matrix of recommended most economic routes based on the identified area of traffic congestion.

96. A method according to claim 95, wherein the area of traffic congestion is identified using a database of traffic patterns.

97. A method according to claim 95, wherein the area of traffic congestion is identified by determining whether real time vehicle location data from a plurality of vehicle-bound probes correspond to a pre-determined level of variance from historic real time vehicle speeds.

98. A system for providing traffic information comprising route results, the system comprising:

a route segment processor for performing, for each segment of a route between an origin point and a destination point, a time-dependent journey planning calculation based on a time during which a vehicle is predicted to be travelling through the segment, to produce a segment result;

a data receiver for receiving real time data relating to real time vehicle location from a plurality of vehicle bound probes and other sensory data to ensure and maintain accuracy of segment results;

a route result formation means for forming a plurality of route results, the plurality of route results being formed based on a plurality of the segment results, wherein the route result formation means comprises means for creating a matrix of vehicle speeds, wherein vehicle speeds over each segment are recorded with specific times of day such that the speeds are divided into a plurality of separate time of day intervals;

a rapid access means, in a digital storage means, for storing the plurality of route results;

a user request processor for accessing the rapid access means for use in responding to a user request for traffic information for a journey between the origin point and the destination point; and

disseminating means for disseminating said traffic information to vehicles on route via a radio data system, a mobile telephone or computer;

wherein the data receiver is operable to verify the real time data by correlating the real time data with data stored in the rapid access means and said other sensory data.

99. A system according to claim 98, wherein the route segment processor comprises means for determining a segment duration for traversing each segment, based on a predicted vehicle speed for the segment at the time during which the vehicle is predicted to be travelling through the segment.

100. A system according to claim 99, wherein the route result formation means comprises means for summing plurality of segment durations to produce an overall route duration.

101. A system according to claim 98, wherein the route segment processor comprises means for determining a predicted vehicle speed for traversing the segment based on the time during which the vehicle is predicted to be travelling through the segment.

102. A system according to claim 101, wherein the route result formation means comprises means for averaging a plurality of predicted vehicle speeds, each corresponding to a segment, to produce an overall predicted route speed.

103. A system according to claim 98, wherein the route segment processor comprises means for performing the time-dependent journey planning calculation based on a time of day and a day of the week during which the vehicle is predicted to be travelling through the segment.

104. A system according to claim 103, wherein the day of the week is selected from a group comprising Bank Holiday, Day before Bank Holiday, Day after Bank Holiday, Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday.

105. A system according to claim 98, wherein the rapid access means comprises a look-up table.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.